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AUTHOR Hom, Willard
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ABSTRACT

This paper describes the environmental scan that the California Community Colleges Chancellor's Office initiated in preparation for its development of a strategic plan. In this scanning effort, environment is defined as "a search for information about the system's external setting." The trends are roughly grouped into five areas: demographics, economics, sociocultural change, politics, and technology/science. The scan focuses on long-term trends in the environment of the state. Some selected trends in the interest of the major factors include: (1) in the demographic factor, trends in aging, immigration, and population composition; in the economic factor, evolution of the labor market, globalization of commerce, and shrinking agricultural production; (2) in the sociocultural factor, increasing multiculturalism, persistence in residential segregation, shifts in gender roles, teen expectations, and consumerism; (3) in the political factor, growth in the areas of Latino influence, distrust in government, demand for accountability, conservatism, and low voter turnout; and (4) in the technological factor, information technology, energy supply, and environmental safety. The paper attempts to synthesize the components of the environmental scan in order to demonstrate how policy-relevant analysis can occur. Using the analysis, an administrator could formulate a long-term plan for achievement of college goals. (Contains an annotated bibliography with 78 references.) (NB)

The Environmental Scan Component of the Strategic Plan for California Community Colleges

November 15, 2001

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California Community Colleges

The Environmental Scan Component
of the
Strategic Plan for
California Community Colleges

November 15, 2001

Willard Hom
Director, Research and Planning Unit
Technology, Research, and Information Systems Division
(whom@cccco.edu)
Chancellor's Office, California Community Colleges
1102 Q Street
Sacramento, CA 95814-6511
(916) 327-5887

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I. Introduction

This paper describes the environmental scan that the California Community Colleges Chancellor's Office (CCCCO) initiated in preparation for its development of a strategic plan. In this scanning effort, we define the environmental scan as "a search for information about the system's external setting." We borrow liberally from the methods of other planners in this process.

Based on prior work we found in the literature, we sought trends roughly grouped in five areas (demographics; economics; socio-cultural change; politics; and technology/science). These five areas obviously overlap extensively, but the distinction provides some simplicity and order in our presentation.

As such, the scan focuses upon long-term trends in the environment of the state. We mention only a few recent events so that the long-range planning horizon can be emphasized. We use a wide variety of data sources in this scan. Much of the material comes from researchers/analysts outside of the educational arena because we need to capture so much of the world surrounding higher education. In fact, this scan takes such a broad view of the "system" that interacts with this microsystem (called the community college system) that we recognize the

need to do another report—one that covers specific parts of the community college microsystem.

Because we have limited time and energy to review the gigantic universe of data that has relevance, we acknowledge that some relevant trends will escape our attention. However, if we envision the strategic planning process (and the environmental scanning component in it) as a continuous effort, we should discover in future scans some of the trends that we may miss on the present "cycle" of planning.

The structure of the scan basically applies the concepts that have been used in the development of market (or marketing) strategy for nonprofit organizations. Use of such a structure helps achieve two important objectives for this scan. First, the structure makes our scan efficient by alerting us, at the start, to the types of data that could have relevance for long-range planning. Second, the structure clarifies how a trend could relate to the community college system, thus enlightening us about potential policy implications.

In the following sections, we will describe the structure in further detail; summarize some of the trends in the five factors; link the trends to the planning process; and provide some resources and documentation for further exploration.

II. A Structure for the Environmental Scan

In our approach, we start with a definition of the demand for the community colleges. This definition immediately must tackle the concept of demand from two very different levels. At one level, we need to define why an individual wants and/or needs a community college. At another level, we need to define why the state needs a community college system. This distinguishes the nonprofit (social) marketing strategy from the traditional corporate (for-profit) strategy; nonprofit strategy must account for the public need/interest. At the community level (the state), we assume that community colleges provide public interest benefits such as economic opportunity, improvement in quality-of-life, equity (social justice), and local economic development.

At the individual level, we assume that a community college provides certain benefits that meet the need(s) of the individual. These benefits may be one or more of the following:

1. Improvement of the student's ability to satisfy a current or potential employer.
2. Achievement of a level of learning that permits transfer to another educational institution.
3. Recreation or personal pleasure.

4. Increase in functionality for personal living.

The four-way classification above is important for understanding the process by which a college will attract a student to its campus. For Benefit 1, the special job skills needed by employers will strongly influence a student's decision to attend a college. For Benefit 2, the four-year college that sets the requirements for transfer will strongly influence a student's decision to attend a campus and take a specific course. For Benefits 3 and 4, the student himself (or herself) will largely decide the demand for such classes; employers or four-year colleges do not necessarily play a role in the pursuit of Benefits 3 and 4. This conceptualization of the demand for courses relates to long-term planning because things that affect one or more of these types of demand deserve our monitoring.

Suppliers of education or training, like community colleges, can provide any of the above four benefits. However, community colleges do not operate in a vacuum. They must compete with out-of-state two year colleges, four-year colleges, university extension courses, corporate trainers, trade/vocational schools, product vendors (at least those who provide training related to their products like Oracle, et al.), user groups, and professional organizations.

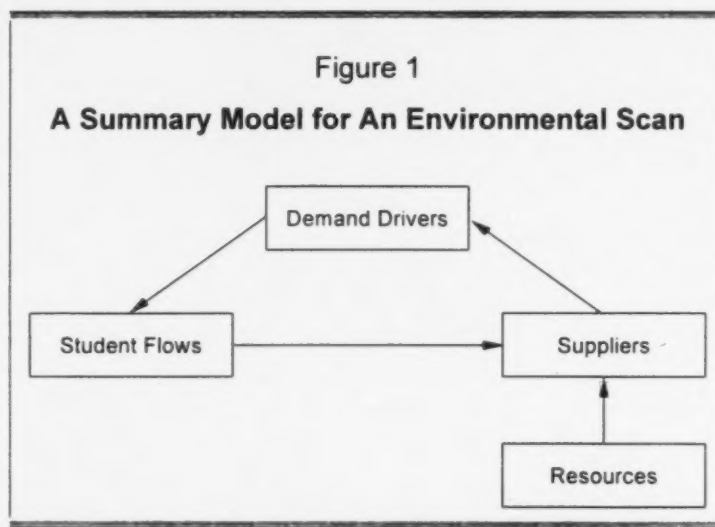
For community colleges, the primary "inputs" of students to their campuses are (1) people shifting from secondary schools and (2) adult learners. From a market strategist's perspective, these are the two primary markets that community colleges serve. This dichotomy of the "student market" conveniently sets apart the two distinct "flows" of students to community colleges. We can forecast the flows from secondary schools with a model that accounts for the population growth (or decline) for the state and the participation rate.

With this dichotomy of flows, we can also forecast the flow from the adult learners, but this model will be relatively more complex. Among its many fragmented factors are migration (both into and out of the state), career changes, reverse transfer, welfare-to-work (and related social programs), recreation/leisure, and continuing education/employee training.

Finally, we consider the inputs that suppliers need to meet the demands of the student flows. These inputs are resources such as faculty, staff, learning materials, buildings, and supplies. If we apply the concept of a "market-driven" system, we view resources as part of the response to the demands. It is important to note that resources do not "drive" this model, because without students there would be no need for the resources. In Figure 1, we depict in a very summary

way the structure that we have just described.

We note that suppliers can influence demand, to some extent, through



marketing strategy. Hence, Figure 1 has an arrow pointing from suppliers to demand drivers. But a higher education marketing strategy will theoretically only stimulate or crystallize a latent or passive demand. Suppliers do not have the ability to create basic demand (the need for postsecondary education) even with the most ingenious marketing strategy. In essence, the socioeconomic environment, the heart of this scan, is the primary driver of demand.

We move from this summary, or heuristic, model to Figure 2. Figure 2 shows the stages of the process by which community colleges receive and deliver students. This figure helps demonstrate the "supply chain" perspective that analysts can use to understand the system behavior in a temporal or sequential context. Because Figure 2 is

the perspective of the community colleges, it does not show the full process by which other segments of higher education receive and deliver their student flows.

three principal demand drivers for attending community colleges. For example, the employer endpoint denotes the student's demand (and the employer's demand as well) for education or training. The four-year

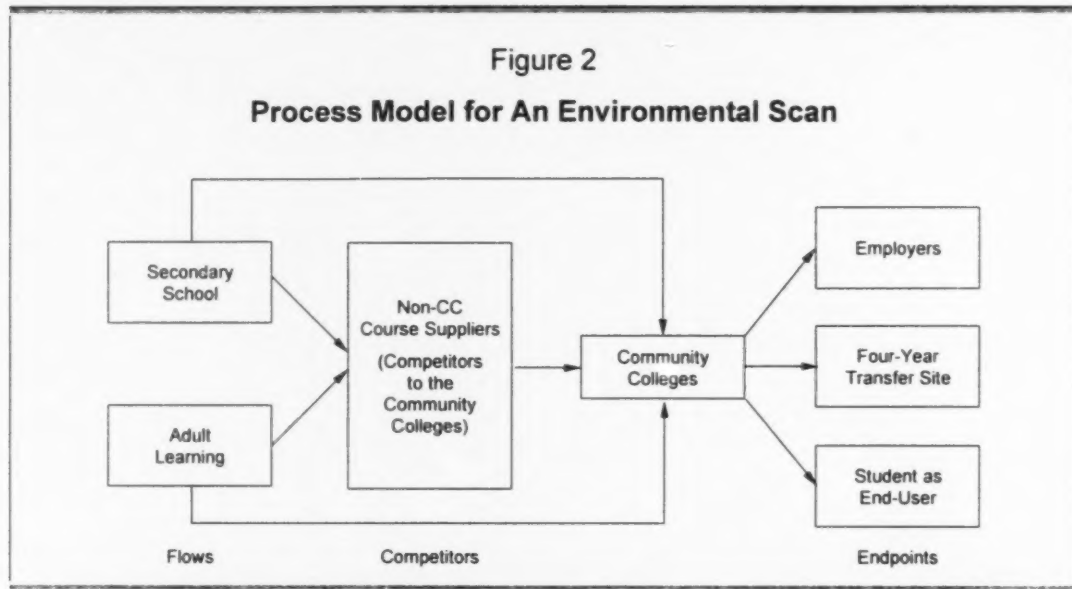


Figure 2 omits the factor of resources that appear in Figure 1. This is primarily a convenience to keep the focus upon the flow of the students. However, this particular focus does not imply that resources are unimportant. Resources are undeniably critical. If we have far more students than resources to serve, then the mismatch of demand and capacity may result in negative social outcomes such as loss in economic opportunity, emigration, and relocation of employers, to name a few.

Figure 2 has the stage labeled "Endpoints" as the logical disposition of students after they attend the community college system. From a market-driven viewpoint, the endpoints constitute the

transfer site denotes the demand for a "stepping-stone"—that is, the use of community colleges as a means to a higher end—a four-year degree. The endpoint of "student as end-user" indicates the achievement of the benefits of recreation or increased personal functioning.

Figure 2 obviously simplifies reality. For example, it ignores the many students who go through this process multiple times (meaning we could have provided a "loop-back" link to the "flows" stage) or who interact repeatedly and in a two-way fashion with both "endpoints" and community colleges, or their competitors, (meaning the lines to

"endpoints" should have "two-way" arrows).

In sum, Figure 1 provides a general "causal" map while Figure 2 provides a view of the chain of events in the environment of interest. An analyst who wants to keep in mind the kinds of events to monitor could refer to Figure 1. An analyst who wants to hypothesize how a change may affect the quantity and/or quality of students for the community college system (often what analysts eventually must do) could refer to Figure 2. Of course, an analyst could also use the detail in Figure 2 to narrow the focus of a scanning effort so that very specific information could be captured.

III. Trends in the Major Factors

In this section, we will briefly address some selected trends of interest in the major factors. The discussion obviously must give cursory treatment to each topic, and we hope this material will still roughly sketch some long-term trends for the state.

In the demographic factor, trends in aging, immigration, and population composition deserve comment here. The non-immigrant portion of the California population will produce a large cohort of retirees and users of elder care services. Immigration has a multidimensional effect on the state. Immigration will fuel much of the state's population growth. It provides employers with a large pool of low-wage unskilled labor (predominately from Mexico) as well as a pool of high-wage highly skilled labor (largely from the developed countries). In terms of population composition, the dual forces of high rates of immigration and high birth rates will give the Latino segment of the population an even larger share of the state's population.

In the economic factor, evolution of the labor market, globalization of commerce, and shrinking agricultural production loom as prominent trends. In the labor market, the opportunities for employment will continue to shift away from manufacturing in favor of service industries; internal labor markets will shrink further; union influence will

continue to dwindle; job security/job stability will continue to decline; and wage inequality will grow even further. Globalization of commerce will pressure the remaining manufacturing firms to cut costs, leave the business, or move overseas, and it will reinforce the aforementioned trends in the labor market. Globalization of commerce totally changes the complexion of economics in California because California's fate becomes so tied to the fate of other economies (and vice versa as well). Policy makers have much less control over the economic developments that occur, compared to the era before free trade. Additionally, the decline in agricultural production will reduce the diversity and robustness of the state's economy and will quite possibly fuel more urbanization.

(California's economy has become more dependent upon the high technology industry for its growth, investment, and relatively high-wage unemployment. But the vulnerability of the state's economy was highlighted this year in the wake of two crises. When the energy crisis struck in the spring of 2001, it forced the state government to take serious budget measures. When the terrorist attacks hit the country on September 11, the tourism business plummeted, triggering widespread personnel cuts and exacerbating an already faltering, pre-recession state economy. It is clear that the state is in

the throes of an economic downturn, but the likelihood of a business cycle upturn in the coming year or so makes it hard to classify the downturn as a long-term trend.)

In the sociocultural factor, increasing multiculturalism, persistence in residential segregation, shifts in gender roles, teen expectations, and consumerism will merit attention. Growth in multiculturalism will create more challenges for the white population to the extent that a new form of "white flight" may emerge. Persistence in residential segregation will continue to limit both the educational and employment opportunities of minority youth, thus contributing to crime rates. Shifts in gender roles will continue to affect the frequency of single head-of household situations and the divorce/separation rates. Expectations of youth (that is, what teenagers plan to do in life) may lead to more negative outcomes such as dropping out of school, drug abuse, teen pregnancy, and youth crime, given the acceleration in the pace of everyday life and a growing attitude for short-term results and gratification. The rise in consumerism will improve the quality of life for citizens (but possibly raise the cost of consumer goods).

In the political factor, growth in the areas of Latino influence, distrust in government, demand for accountability, conservatism, and low voter turnout appear as noteworthy trends. Increase in Latino influence should promote legal and illegal immigration of Latino peoples as well as acceptance or integration of Latino culture. Distrust in government will actually contribute to

two of the other trends listed above, demand for accountability and local control. However, distrust will have the distinct effect of creating resistance among the middle- and upper-class to any additional budget/funding proposals. Demand for accountability will increase the "cost-of-doing business" while promoting the apparent responsiveness of public officials and agencies and adding to the call for more local control. The tendency for state governments to implement concepts, or fads, that the business world has already popularized will contribute to the trend toward increased accountability. The trend for conservatism, which is a debated phenomenon, facilitates the operation of "identity politics" among other reactions to perceived liberal agendas. Finally, declines in voter turnout bode poorly for the advocates of social reforms because conservative populations tend to have relatively high voter turnout.

In the technological factor, information technology (IT) with special emphasis on the Internet, energy supply, and environmental safety are the leading areas of interest. IT's growth will continue to make the network organizational structure, in both formal and informal groups, a feasible interaction format, to promote the diffusion of ideas and information, to create additional costs for illiteracy, to promote the flexible work schedule, and to widen the gap between the *haves* and the *have-nots*. The recently heightened interest in the state's power situation will continue as air pollution becomes more threatening, population increases cause leaps in energy consumption, and commute behavior reaches new extremes. Lastly, environmental safety

will rise in importance as population density increases, new health hazards emerge, and sites for waste disposal diminish in number and access.

IV. Linking Trends to Planning

In this section, we try to synthesize the bits and pieces of the environmental scan so that we can demonstrate how policy-relevant analysis can occur. First, we explore the implications of the trend in accountability. Then we will close by showing how we could interpret these trends in light of the model in Figure 1.

The scan indicates that accountability will continue to escalate in importance. This should surprise few people. Accountability is a concept that individuals commonly endorse at a personal level, and government has long understood that it is a staple belief in the citizenry. What will develop in the coming years is the much higher level of implementation that it will experience in previously unbridled areas.

The trends toward distrust in government, consumerism, growth in population diversity, rapid dissemination of information, performance measures in the workplace, and the "commercialization" of higher education will all contribute to much tighter control of higher education. (By commercialization, we mean the adoption of various business practices.) The movement will lean more toward greater accountability, rather than less accountability, because it is difficult to argue persuasively how less

accountability can serve the public good. Opponents to increased accountability carry a tremendous burden of proof, compared to proponents of increased accountability. Opponents have a complex, sometimes very technical, argument to make, and the public (including legislators) has traditionally shown skepticism for explanations or arguments that lack immediate, intuitive appeal.

So how might increased accountability evolve? One incarnation is performance funding. The legislation embodied by the *Partnership for Excellence* exemplifies a developmental stage of the accountability trend. If a scathing critique (like *A Nation at Risk*) of community college performance were to appear in the mass media, then the movement toward controls like performance funding will accelerate in pace.

Another consequence of the accountability trend would be the increase in weight given to measures of student satisfaction. It is not so far-fetched to envision the methodical integration of student voice in the accountability framework, despite the opposition of faculty. Measurement of student opinion (for satisfaction and student engagement, among other things) already occurs on many campuses; what has yet to occur is a

consensus about what actions to take given the survey results.

Now we explore how we link the trend in accountability to long-term planning. Note that although our society may witness a general trend in accountability, its influence on specific types of students or on specific types of learning (course work or discipline) can vary widely in depth, breadth, and timing. The influence will usually be a function of a salient event that "triggers" a form of accountability. For example, a scandal in the level of competence among security workers could trigger a form of accountability for the quality of training that such workers have received. This accountability would logically limit its scope to security work. The trend could affect a community college in terms of a new market (the market for certification of competence in security work) and a new restriction (the delineation of minimum standards for course work).

Accountability effects on the student flows:

The use of exit exams and the Academic Performance Index in secondary education provide a form of accountability at the individual student and the school levels, respectively. We can envision the following possible developments in the future that could affect the supply side of the model (the left part labeled "flows"):

- Student learning could improve to such a level that fewer youths would need remedial education.

To the extent that students attend community colleges (instead of a four-year college) because they need remedial work, some decrease in demand for remedial work at community colleges may develop.

- As an offsetting development, students who were so academically unprepared for postsecondary education may raise their levels of learning to the point that they develop aspirations to attend college (and possibly choose a community college as that education provider).
- The retention of some students in secondary school could make some youths unavailable for enrollment at a community college.

Accountability effects on the demand for community college services (education or training):

Accountability at the level of adult learners would tend to take shape as requirements like certification or licensure. This effect would reflect the demand side of the model (the right side of the chart). We might anticipate the following developments:

- To the extent that community colleges have the authority, means, and interest to offer a form of certification in demand, then enrollment and revenue could increase.
- To the extent that a provider other than the community colleges has the authority, means, and interest to offer the demanded certification, the

community colleges would incur an opportunity cost or a diversion of existing enrollment to such a certification provider. (This "effect" also refers to the "Competitors" box in Figure 1.)

- To the extent that the rules for certification are determined by an entity external to the community colleges, the community colleges may lose some authority or control over the content of its offerings.
- To the extent that articulation of a community college course is a form of accountability, this form of control and power that receiving institutions can exert over the community colleges will remain.

Given the above analysis, an administrator could formulate a long-term plan that could position the community college to achieve its most positive outcomes possible. If a change in the volume of student flows can be predicted, then community colleges could prepare for this contingency by taking steps such as adjusting their future budgets or reallocating excess capacity to other areas in an orderly way. If a growth in demand for certification can be predicted, then community colleges could prepare by organizing offerings in a manner that could "preempt" the "market" for a given type of certification.

V. Conclusion

This paper presents the initial stage of an effort at environmental scanning for the system of community colleges in California. Along with the identification of some important trends, it offers a framework for scanning and for applying the data to policy. Of course, much more work that narrows the focus to the level of direct actions of, or to, the community colleges is needed. As time passes, we anticipate the need to perform again even the current initial portion of the scan we have reported here. Fortunately, the long-term trends presented will minimize the need to perform this level of scanning on an annual or biennial basis (although we still encourage continuous scanning no matter what the long-term trends show).

This analysis may not be directly applicable to an individual community college or an individual district. Beyond this, planners need to beware of interpreting a well-known trend as applicable to every situation that seems to have the same contexts. What can be true for a large group may not be true of each member within the group (the "ecological fallacy"). This leads to the next point.

To a great extent, environmental scans for individual colleges or districts face a special hurdle. Information on most of the long-term trends we have

covered derive from studies of nationwide samples. In most cases, there is no data from such studies that would permit inferences at the level of a district or a college. The level of data collection and analysis thus forces the analyst/planner at the individual college or district to use deductive reasoning (versus the inductive reasoning that would occur at the federal level of planning). Individual colleges or districts generally lack data at the level most suitable for their level of analysis, and most of them lack the resources to do their own collection of "primary data."

Finally, we need to have a realistic perspective in the use of an environmental scan for strategic planning. We have more confidence in trends that have been observed for more time, rather than less time. But even with this precept, we could be vulnerable to observing a trend at a peak, rather than at a plateau or at an upward slope. In addition, we have more confidence in trends that stem from large-scale, deep changes, rather than trends that have sources of smaller scale and less depth. In addition, we should expect revision of it as time gives us new insights and lessons.

VI. Some Data Sources: An Annotated Bibliography

In this section, we provide a select bibliography as one potential source of data and information for people interested in environmental scanning. This brief listing emphasizes sources for background on the environmental scanning process and sources for social, economic, and political change. Three websites, shown immediately below, can provide quick access to a wealth of information.

1. One resource that covers a wide spectrum of social and political developments in California is the Public Policy Institute of California, which is a "think tank" headquartered in San Francisco. Their publications are listed at their website (www.ppic.org).
2. The California Department of Finance maintains a website that provides free access to a variety of social indicators and demographic data (<http://www.dof.ca.gov>).
3. The Federal Reserve Bank of San Francisco provides free access to an assortment of reports, briefs, and working papers, and analysts can gather analyses and news from these products (<http://www.frbsf.org>).

The listing below includes the primary references that supported the

results of our environmental scan. We recognize that the list is hardly exhaustive so analysts will readily find other references that will aid them as well.

Aaker, D. A. (1995). *Strategic Market Management*. New York: John Wiley and Sons.

An exposition of the strategic planning practices involved in marketing by the private sector. Many of the concepts can transfer over to a strategic plan for community colleges.

Altbach, P. G., Berhdahl, R. O., and Gumport, P. J. (Eds.). *American Higher Education in the Twenty-First Century: Social, Political, and Economic Challenges*. Baltimore: Johns Hopkins University Press.

In this volume of contributed chapters, there are chapters on the legal environment in higher education (by Michael A. Olivas); autonomy and accountability (by Robert O. Berdahl and T. R. McConnell); and twenty-first century issues facing higher education (by Ami Zusman).

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- Arrow, K. J., (1974). Higher Education as a Filter. In K. J. Lumsden (Ed.), *Efficiency in Universities: The La Paz Papers* (pp. 51-74). Amsterdam: Elsevier Scientific Publishing.

This writing specifies how employers can place value on educational attainment, aside from the knowledge and skills (gain in learning) that an individual may acquire through higher education.
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- This is an analysis of the trends in the restructuring of work in the U.S. as seen by some of the leading experts in human resources.
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- This is an extensive discussion of the issues involving the community college's role in workforce preparation.
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